REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1, 2, 5 and 8 are currently being amended. The amendments to claims 1 and 2 are to improve their readability without narrowing their scope. The amendments to claims 5 and 8 are to put these claims into independent form, and include amendments corresponding to those of claim 1, from which these claims originally depended.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-14 remain pending in this application.

Allowable subject matter

Applicants appreciate the indication of allowable subject matter in claims 5-10 and 12-14. Claims 5 and 8 have been amended to be in independent form and thus are in *prima facie* condition for allowance. Dependent claims 6-7 and 9-10 ultimately depend from claims 5 and 8, respectively, and are thus likewise in *prima facie* condition for allowance.

Rejections under 35 U.S.C. §§ 102 and 103

Claim 1, 2, 4 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,282,104 to Kern ("Kern"). Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kern in view of U.S. Patent No. 5,869,956 to Nagao et al. ("Nagao"). Insofar as these rejections can be applied to the claims as amended, applicants respectfully traverse for at least the following reasons.

Independent claim 1 is directed to a maximum power follow-up control apparatus, and comprises: (1) "an approximate function storing part that stores an approximate function related to a maximum power point corresponding to the output level of the power generator according to characteristics of the output power and the operating voltage", and (2) "a control

part that calculates an operating voltage value corresponding to the present output power on the basis of the approximate function as stored in the approximate function storing part and that sets the calculated operating voltage value as an operating voltage value of the power converter in order to make the power point related to the output power in correspondence with the output level of the power generator follow up with the maximum power point." Kern fails to disclose either of features (1) or (2).

Kern discloses a DC injection and even harmonics control system (title). The system includes a power source 12 providing power to a power converter 22 (See FIG. 1). The system includes a feedback control loop 30 that calibrates and operates the power converter 20 (col. 8, lines 52-55). The feedback control loop 30 include a CT signal combiner 36 that receives and combines signals from current transformers 32 and 34 (col. 9, lines 12-15). A harmonic analyzer 38 receives the combined signal from the combiner 36 and determines the phase of the second harmonic current through transformer 26 (col. 9, lines 27-32). A controller 40 receives an output signal from the harmonic analyzer 38 and operates a reference device 24 to adjust a dc offset to the power converter 22 to zero out the linearized second harmonic magnitude (col. 10, lines 1-8), or to adjust the dc offset in some other fashion (col. 10, lines 8-19).

Kern, however, discloses neither the approximate function storing part, nor the control part as specifically recited in claim 1. The Office Action equates the signal combiner 36 with the approximate function storing part as recited. The function of the signal combiner 36, however, is merely to combine signals from the current transformers 32 and 34. Neither the signal combiner 36 of Kern, nor any other of the components of its system, "stores an approximate function related to a maximum power point corresponding to the output level of the power generator according to characteristics of the output power and the operating voltage." Moreover, Kern is not directed to following up with a maximum power point, but instead to zeroing out the linearized second harmonic magnitude. Thus, the system of Kern is quite different in structure and purpose from that of claim 1.

Kern also fails to disclose the control part as specifically recited in claim 1. The Office Action equates the controller 40 with the control part as recited. The controller 40, however, while controlling the reference device 24 to adjust a dc offset to the power converter 22 to perform functions such as zeroing out the linearized second harmonic magnitude, does not calculate any operating voltage value (of the power converter) corresponding to a present output power on the basis of any stored approximate function. Nor does the controller 40 set the calculated operating voltage value as an operating voltage value of the power converter 22 in order to make a power point related to the output power in correspondence with the output level of the power generator (power source 12) follow up with the maximum power point. As mentioned above, Kern is not directed to following up with a maximum power point, and describes a system quite different in structure and purpose from that of claim 1.

Nagao fails to cure the deficiencies of Kern. Nagao was cited for disclosing a hill climbing method (which is known as disclosed on pages 2-3 of the present specification), but also fails to suggest either the approximate function storing part, nor the control part as specifically recited in claim 1.

The rejected dependent claims 2-4 and 11 are patentable for at least the same reasons as claim 1, from which they ultimately depend, as well as for further patentable features. For example, Kern fails to disclose any of the voltage value calculating part, voltage value setting part or judging part, as specifically recited in claim 2. Nor does Kern disclose as recited in claim 11, "the approximate function storing part is arranged to preliminarily store approximate functions corresponding to types of the power generator."

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment,

to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date September 7, 2005

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